REMARKS

This Response, filed in reply to the Office Action dated September 9, 2009, is believed to be fully responsive to each point of objection and rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 19, 20 and 31-35 are all the claims pending in the Application. Claims 19, 20 and 31-35 are rejected.

No new matter is added by way of this response. Consideration of the remarks herein is respectfully requested.

Claims 19, 20, 31, 32 and 35 are not Anticipated

1. On page 2 of the Office Action, Claims 19, 20, 32 and 35 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Fleming *et al.* (U.S. Patent No. 6,423,501).

In justifying the rejection, the Examiner contends that Fleming *et al.* teaches a method for treating inflammatory diseases, including *inter alia* inflammatory bowel disease, comprising administering an agent that induces CD81-mediated signal transduction, citing column 13, lines 34-45. The Examiner further contends that Fleming *et al.* discloses that such agents "can be anything [that] binds to or interacts with CD81 and induces … or enhances CD81-mediated signal transduction," and may include *inter alia* polyclonal or monoclonal anti-CD81 antibodies, citing column 9, line 65, to column 10, line 3. With specific regard to the subject matter of Claims 32 and 35, the Examiner acknowledges that Fleming *et al.* is entirely silent as to the treatment, or improvement, of shortened intestinal length or diarrhea. However, in an attempt to sustain the rejection, the Examiner purports that because "a compound and all of its properties

are inseparable" (citing *In re Papesch*), the anti-CD81 antibody of Fleming *et al.* would inherently treat or improve such symptoms.

In response to Applicants' previous arguments of record that Fleming *et al.* fails to provide an enabling disclosure, and thus cannot, as a matter of law, qualify as an anticipatory reference, the Examiner justifies maintaining the rejection, in part, on the legal conclusion that "a patent is an enabling reference *for all that it teaches*." (Emphasis added.) Furthermore, the Examiner purports that the disclosure of Fleming *et al.* does place "the public … in possession of the claimed subject matter ... [t]he reason [being] that [although] section 112 'provides that the specification must enable one skilled in the art to 'use' the invention[,] … section 102 makes no such requirement as to an anticipatory disclosure" (citing *In re Hafner*, 410 F.2d 1403, 1405 (C.C.P.A. 1969)).

Applicants respectfully disagree, and traverse the rejection in view of the following remarks.

Initially, Applicants respectfully point out that anticipation requires, in a single prior art reference, disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck and Co.*, 722 F.2d 1542 (Fed. Cir. 1983). *See also*, *Net MoneyIn, Inc. v. Verisign, Inc.*, 2008 U.S. App. LEXIS 21827, 1, 27 (Fed. Cir. 2008) (In order to anticipate a claim under 35 U.S.C. § 102, a reference must disclose within the four corners of the document not only all of the elements claimed but also all of the elements arranged or combined in the same way as recited in the claim).

Turning to the substance of the rejection, the Examiner relies upon a variety of different embodiments of Fleming *et al.*, not directly related to each other, in an attempt to piece together

all the recited claim elements; for example, the Examiner cites to column 13, lines 34-45, to allege that Fleming *et al.* discloses the treatment of inflammatory bowel disease, and column 9, line 65, to column 10, line 3, as allegedly disclosing anti-CD81 antibodies. However, the cited sections recite a plethora of alternative and distinct embodiments, and at no point does Fleming *et al.* disclose Applicants' claimed combination, *arranged as described in the claims*, in a single source so as to direct those skilled in the art to the claimed invention without any need for picking and choosing amongst these alternative and distinct embodiments. To the contrary, the rejection is premised on picking and choosing between the distinct and alternative embodiments recited in columns 9, 10 and 13 of Fleming *et al.* This, however, is not the law.

Piecing together Applicants' claimed invention by picking and choosing between alternative and distinct embodiments, in the absence of any direct relationship between the selected embodiments - as is the case here, does not represent disclosure of the claimed invention "as arranged in the claim," and thus does not constitute anticipation. Specifically, Applicants respectfully submit that the Examiner's position runs counter to the court's holding in *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008), wherein the Federal Circuit clarified that the test for anticipation is that a reference must not only disclose all elements of the claim within the four corners of the document, but those selected elements must be "arranged or combined in the same way as in the claim," so as to prevent picking and choosing of unconnected elements to piece together a claimed invention. The court, citing *In re Arkley*, 455 F.2d 586 (C.C.P.A. 1972), noted that "[t]he prior art reference must clearly and unequivocally disclose the claimed invention or direct those skilled in the art to the invention without any need for picking, choosing, and combining various disclosures not **directly** related to each other by the teachings of the cited reference." (Emphasis added.) However, the instant rejection is

predicated on exactly such picking and choosing; one of skill in the art would have to pick and choose between the plethora of alternative and distinct embodiments recited in columns 9, 10 and 13 of Fleming *et al.* to arrive at Applicants' claimed invention, when no direct relationship between the selected elements has been disclosed. Consistent with the court's holding in *In re Arkley*, such picking and choosing is simply not permissible to sustain a finding of anticipation.

Similarly, due to the vast number of possible alternative embodiments disclosed by Fleming *et al.*, the claimed method cannot inherently flow from these portions of Fleming *et al.*, as would be required to maintain inherency on this basis. See *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. Appd Interfer. 1990); indeed, it is well-settled law that the concept of inherent disclosure does not negate the requirement that the selected elements be disclosed in the same way as arranged in the claim without any need for picking and choosing. *See Therasense, Inc. v. Becton, Dickinson & Co.*, 2008 WL 254904 at *5 (Fed. Cir. (Cal.)). In *Therasense*, the Federal Circuit stated that "[for anticipation], each claim element must be disclosed, either expressly or inherently, in a single prior art reference, *and the claimed arrangement or combination of those elements must also be disclosed, either expressly or inherently*, in that same prior art reference [emphasis added]." *Id.* Because the claimed arrangement of the claim elements is not disclosed, either expressly or inherently, by Fleming *et al.*, Fleming *et al.* fails to support a finding of anticipation. By extension, because the subject matter of Claim 19 is not disclosed by Fleming *et al.*, either expressly or inherently, the allegedly inherent features recited in Claims 32 and 35 cannot be disclosed. Fleming *et al.* thus fails to teach the invention as claimed in Claims 19, 20, 32 and 35.

Further, to anticipate, the reference must enable the claimed invention. *See Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1336 (Fed. Cir. 2008). Applicants strongly, but

respectfully, disagree with the Examiner's contention that Fleming *et al.* is enabling for the claimed invention. First, while the Examiner purports that "a patent is an enabling reference for all that it teaches," Applicants note that such a position is unsupported by law, and indeed, vitiates the very requirement that an anticipatory reference be enabling; under this standard, a reference would *necessarily* enable an invention so long as the claim elements were disclosed, *irrespective* of whether undue experimentation would be required. Again, however, this is not the law. *See e.g. Impax Laboratories, Inc. v. Aventis Pharmaceuticals Inc.*, 545 F.3d 1312, 1316 (Fed. Cir. 2008) (finding a prior art reference to be non-enabling, and thus non-anticipatory, even though all the claim elements were disclosed). Maintaining the rejection in whole or in part on this basis is thus clearly improper.

Moreover, the Examiner's contention that the disclosure of Fleming *et al.* is anticipatory because it does place "the public … in possession of the claimed subject matter … [t]he reason [being] that [although] section 112 'provides that the specification must enable one skilled in the art to 'use' the invention[,] … section 102 makes no such requirement as to an anticipatory disclosure," is similarly inapt. While the Examiner cites to *In re Hafner*, 410 F.2d 1403, 1405 (C.C.P.A. 1969) in support of this proposition, *Hafner* provides no credence to this argument; the claims at issue in *Hafner* were *product* claims, not *method-of-use* claims, as are at issue in the instant case. The Federal Circuit has held that, in the context of anticipation of method-of use claims:

> where a method claim is at issue, it is a largely meaningless formulation of the standard to require a reference to disclose how to "make" that method in order to anticipate. For method claims, the "make" requirement becomes, in effect, a "use" requirement. The only way one can show that a reference enables the method is to show that a person of ordinary skill would know how to use - in

> other words, to practice or to carry out - the method in light of the reference [emphasis in original].

In re Gleave, 560 F.3d 1331, 1335 (Fed. Cir. 2009). Accordingly, it cannot credibly be argued, as the Examiner has attempted to do, that Fleming *et al.* qualifies as enabling prior art simply because it does not need not enable one of skill in the art to "use" the claimed invention (but rather only needs to enable one of skill in the art to "make" the invention). As noted in *Gleave*, the "make" requirement becomes a "use" requirement when method-of-use claims are at issue. Accordingly, the rejection is sustained based on flawed reasoning, and should be withdrawn.

Nevertheless, Applicants respectfully submit that Fleming *et al.* fails to enable one of skill in the art to practice the presently claimed method, at least because one of skill in the art would have had to embark on undue experimentation to connect antibody binding to CD81 as a treatment for inflammatory bowel disease amongst the myriad of other diseases recited by Fleming *et al.* As Applicants have previously noted on the record,[1] as a result of such, Fleming *et al.* does not place those of skill in the art, in the absence of extensive and undue experimentation, in possession of the claimed invention, as is required to sustain the rejection. *See Impax*, 545 F.3d at 1315. In view of the foregoing, Applicants respectfully submit that Fleming *et al.* neither teaches nor enables the presently claimed invention, and thus cannot qualify as an anticipatory reference.

Withdrawal of the rejection is respectfully requested.

[1] See page 4, 1st paragraph, of the Amendment filed July 30, 2009.

2. On page 3 of the Office Action, Claims 19, 20, 32 and 35 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by WO 98/25647. The substance of the rejection is essentially identical to the rejection of Claims 19, 20, 32 and 35 over Fleming *et al.*, discussed above.

Initially, Applicants note that WO 98/25647 is the publication of PCT/US97/22743, a continuation of U.S. Application No. 08/954,279, which issued as U.S. Patent No. 6,423,501 (*i.e.*, Fleming *et al.*, discussed above). Thus, Claims 19, 20, 32 and 35 are not anticipated by WO 98/25647 for the exact same reasons as discussed above in response to the rejection of Claims 19, 20, 32 and 35 over Fleming *et al.*

Withdrawal of the rejection is respectfully requested.

3. On page 5 of the Office Action, Claims 19, 20, 31, 32 and 35 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Curd *et al.* (WO 00/67796).

In making the rejection, the Examiner contends that Curd *et al.* teaches a method for treating inflammatory bowel diseases, comprising administering an anti-CD81 antibody, citing Claims 1, 2, 3, 6 and 7. With specific regard to the subject matter of Claims 32 and 35, the Examiner acknowledges that Curd *et al.* is entirely silent as to the treatment, or improvement, of shortened intestinal length or diarrhea. However, in an attempt to sustain the rejection, the Examiner purports that because "a compound and all of its properties are inseparable" (citing *In re Papesch*), the anti-CD81 antibody of Curd *et al.* would inherently treat or improve such symptoms.

Applicants respectfully disagree, and traverse the rejection in view of the following remarks.

Initially, Applicants respectfully submit that Claims 19, 20, 31, 32 and 35 are not anticipated by Curd *et al.* essentially for the same reasons as presented above in response to the anticipation rejection over Fleming *et al.*

Specifically, like the rejection over Fleming *et al.*, the Examiner relies upon a variety of different and alternative embodiments of Curd *et al.*, not directly related to each other, in an attempt to piece together all the recited claim elements. For example, the Examiner cites to Claims 1, 2, 3, 6 and 7 in an attempt to disclose the claimed invention. However, Claim 2 encompasses a myriad of alternative and distinct B-cell surface antigens that may be antagonized, and Claim 6 recites a plethora of alternative and distinct diseases that may be treated by antagonism of a B-cell surface antigen. Claims 2 and 6 each recite a plethora of alternative and distinct embodiments, and at no point does Curd *et al.* disclose Applicants' claimed combination, *arranged as described in the claims*, in a single source so as to direct those skilled in the art to the claimed invention without any need for picking and choosing amongst these alternative and distinct embodiments. To the contrary, the rejection is premised on picking and choosing between the distinct and alternative embodiments recited in Claims 1, 2, 3, 6 and 7. As noted previously, this is not the law.

Piecing together Applicants' claimed invention by picking and choosing between alternative and distinct embodiments, in the absence of any direct relationship between the selected embodiments - as is the case here, does not represent disclosure of the claimed invention "as arranged in the claim," and thus does not constitute anticipation. See *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008); and *In re Arkley*, 455 F.2d 586 (C.C.P.A. 1972). However, the instant rejection is predicated on exactly such picking and choosing; one of skill in the art would have to pick and choose from the plethora of possible alternative, and distinct,

embodiments recited in Claims 1, 2, 3, 6 and 7 of Curd *et al.* to arrive at Applicants' claimed invention, when no direct relationship between the selected elements has been disclosed. Curd *et al.* thus fails to teach the invention as claimed in Claims 19, 20, 31, 32 and 35.

Moreover, like the allegedly anticipatory patent in *Impax*, it would require extensive and undue experimentation by one of ordinary skill in the art to connect antagonism of CD81 via an anti-CD81 antibody to the treatment of inflammatory bowel disease, in light of the plethora of different diseases and B-cell markers recited in Claims 2 and 6. Thus, Curd *et al.* also fails as an anticipatory reference also because it fails to enable the presently claimed method.

In view of the foregoing, Applicants respectfully submit that Curd *et al.* neither teaches nor enables the presently claimed method, and thus cannot qualify as an anticipatory reference.

Withdrawal of the rejection is respectfully requested.

Claims 31, 33 and 34 are Patentable Under 35 U.S.C. § 103(a)

On page 6 of the Office Action, Claims 31, 33 and 34 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Fleming *et al.* (U.S. Patent No. 6,423,501), WO 98/25647 or WO 00/67796, in view of Owens *et al.*, of record.

In making the rejection, the Examiner relies upon Fleming *et al.*, WO 98/25647 and WO 00/67796 for the same reasons as in the anticipation rejections discussed above. However, the Examiner acknowledges that neither Fleming *et al.*, WO 98/25647 nor WO 00/67796 disclose or suggest using a Fab, $F(ab')_2$, Fv or scFv, as recited in Claim 31. In an attempt to rectify such deficiency, the Examiner cites to Owens *et al.*, who allegedly discloses the production of single chain antibodies, Fab fragments, and $F(ab')_2$ fragments. The Examiner contends that one of ordinary skill in the art would readily have modified the antibodies of Fleming *et al.*, WO

98/25647 or WO 00/67796 to produce such antibody molecule variants, because they are "the reagents of choice for some clinical applications." Further, the Examiner contends that one of ordinary skill in the art would readily have arrived at the claimed dosages in Claims 33 and 34 through routine optimization.

Applicants respectfully disagree, and traverse the rejection in view of the following remarks.

As discussed above, neither Fleming *et al.*, WO 98/25647 nor WO 00/67796 disclose, expressly or inherently, a method of improving or treating inflammatory bowel disease comprising administering an anti-CD81 antibody to a patient in need thereof, and there exists nothing in these references that would incite any expectation of success in performing such a method. Further, because Owens *et al.* fails to rectify this deficiency, and merely discloses the use of antibody molecule variants, even assuming *arguendo* that one of ordinary skill in the art were to combine Fleming *et al.*, WO 98/25647 or WO 00/67796 with Owens *et al.*, they would not arrive at the presently claimed invention. Applicants respectfully submit that Claims 31, 33 and 34 are not rendered obvious for at least this reason.

Withdrawal of the rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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